

SVETLANA TECHNICAL DATA

3CX400A7/8874

High-Mu Power Triode

The Svetlana™ 3CX400A7/8874 is a high performance ceramic/metal power triode designed for use in communications, paging and commercial service. The principal use is as an RF amplifier, in Class A, B or C service. The Svetlana 3CX400A7/8874 may also be operated as a pulse modulator with an increase in maximum plate voltage up to 3500 volts. Maximum plate current is 6 amps at a pulse duration of 100 microseconds.

The Svetlana 3CX400A7/8874 is a direct replacement for the model 3CX400A7/8874 manufactured in the United States.

Characteristics

Electrical

Cathode:	*Oxide-coated unipotential*	
Heater voltage (AC or DC)	*6.3 ± 0.3*	*V*
Heater current @ 6.3V	*3.0*	*A*
Transconductance (average)	*29,000 µmhos*	
Maximum frequency at full ratings	*500*	*MHz*
Interelectrode capacitances, with cathode grounded:		
Input	*20.5*	*pF*
Output	*0.03*	*pF*
Grid-Plate	*6.0*	*pF*
Interelectrode capacitances, with grid grounded:		
Input	*20.5*	*pF*
Output	*6.0*	*pF*
Plate-Cathode	*.03*	*pF*

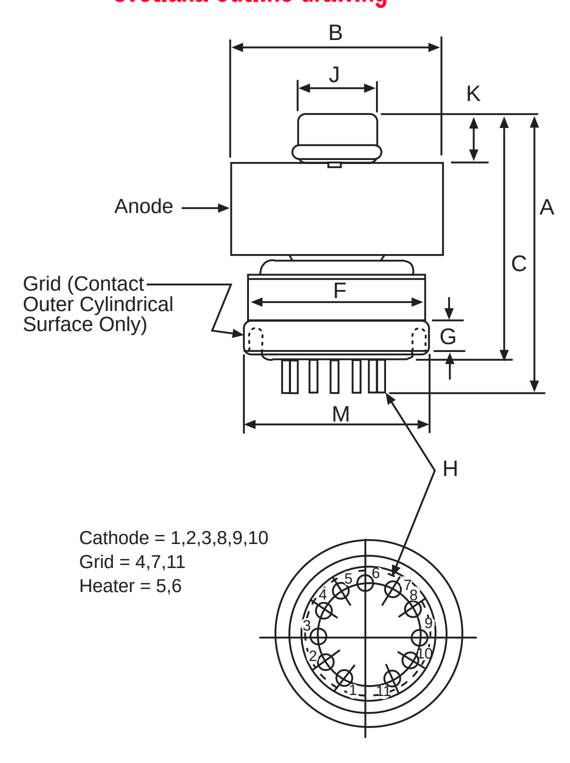
Mechanical

Cooling	*Forced air*
Base	*11 pin with ring EIA No. E11-81*
Socket	*E.F. Johnson #124-311-100*
Operating position-	*Vertical, base up or down*
Nominal dimensions:	
Diameter	*41.7 mm (1.64 in.)*
Length	*54.6 mm (2.15 in)*
Maximum operating temperature	*250˚ C*
Net weight (average)	*122 g (0.269 lb.)*

Maximum ratings

DC plate voltage	*2200*	*V*
Maximum-signal DC plate current	*350*	*mA*
Plate Dissipation	*400*	*W*
Grid Dissipation	*5*	*W*

Svetlana Outline drawing



Dimensional Data

Dim.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	50.85	54.41	2.002	2.142
B	40.89	41.66	1.610	1.640
C	45.97	48.51	1.810	1.910
F	—	35.71	—	1.406
G	4.75	—	0.187	—
H	BASE: E11-81 (EIA DESIGNATION)			
J	13.75	14.55	0.541	0.573
K	6.10	—	0.240	—
M	35.99	36.40	1.417	1.433



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Typical Operation, Class AB2 Cathode Driven

Frequency in MHz		30	150	432
DC plate voltage V		2000	2000	2000
Cathode voltage V		8.2	9.8	8.2
Peak RF grid-cathode voltage	67	50	67	V
Two tone plate current	312	245	300	mA
Zero signal plate current	22	10	22	mA
Two tone grid current	12	10	39	mA
Peak RF drivng power	26	18	27	W
Power output (approx.)	587	526	505	W

Cooling Data

Anode Dissipation Watts	Air Flow CFM	Pressure Drop Inches of Water
200	4.0	0.11
300	6.0	0.22
400	8.6	0.37

Heater/Cathode Operation

Frequency MHz	Heater Voltage
<300	6.3
301-400	6.0
401-500	5.7

